



Data are preliminary and subject to change

United States Army Public Health Command

Army Vector-borne Disease Report

22 August 2013

- **West Nile virus:** CDC reports 296 cases including 11 deaths for calendar year 2013; Army reports no confirmed/probable cases or deaths.
- **WNV mosquito pools:** PHCR-North reports 9 new positive mosquito pools for a total of 14 positive pools to date. PHCR-South reports 2 new positive mosquito pools; PHCR-West reports no positive pools.
- **Dengue virus:** CDC reports 167 cases for calendar year 2013; Army reports 3 cases among Army AD and beneficiaries this year.

West Nile Virus (WNV)

United States

- Since the last published report, 197 additional human WNV cases have been reported to the CDC, including seven additional deaths.
- The majority of reported cases continue to be non-neuroinvasive (51%, n=151).
- As of 20 August, 43 states (an increase of 5 since the last report) and Washington, D.C. report WNV activity of some type (infections in humans, birds, or mosquitoes).
- 27 states report WNV human infections in 2013; the highest number of cases are reported by CA (n=59), SD (n=52), and CO (n=36), accounting for almost half of all cases (n=147).
- Seven states report one fatality each; California reports 4 fatalities.

Cases in Army AD and Other Beneficiaries

- In 2013, no confirmed or probable WNV infections in Army AD or other beneficiaries have been reported.
- Two individuals with WNV-related diagnoses were identified in purchased care records; however, as the case statuses cannot be confirmed, they are excluded from this report.
- No WNV fatalities have been reported among Army AD or beneficiaries this year.

DoD Mosquito Surveillance from Army Laboratories

- PHCR-North reports nine new positive pools in the greater DC metropolitan area (an increase from five).
- PHCR-South reports two positive pools (Ft. Sill, OK); PHCR-West reports no positive pools.

Mosquito Pool Testing	PHC Region	Reporting Period [¥]	Year to Date 2013
		No. Positive (No. Tested)	No. Positive (No. Tested)
	North	9 (77)	14 (304)
	South	2 (103)	2 (742)
	West	0 (27)	0 (79)

[¥] Absolute difference between last published report and this week's year to date number.

West Nile Virus Activity by State – United States, 2013 (as of August 20, 2013)



WNV Human Cases^β

Population	Reporting Period [¥]	Cum. 2013
United States	197	296
Army Cases[±]		
Confirmed and Probable		
Army AD [‡]	0	0
Army Non-AD [†]	0	0
WNV Human Deaths		
United States	7	11
Army	0	0

Sources: CDC and AIPH DRSI as of 20 August 2013.

Note: Reporting location may differ from exposure location.

^β Confirmed and probable neuroinvasive and non-neuroinvasive cases.

[¥] Difference between last published report and this week's cumulative 2013 value.

[±] Only Army AD and beneficiaries who have a Reportable Medical Event generated on their behalf and whose case status is verified as confirmed/probable are included in this report.

[‡] Active duty, recruits, cadets.

[†] Army-associated beneficiaries.

Dengue Virus (DENV)

- Through 10 August, 167 cases of Dengue virus (DENV) have been reported to the CDC in 2013.
- The U.S. Territory of Puerto Rico, endemic for DENV, reports 4,188 DENV cases in 2013, compared to 1,189 cases at this time last year (3.5 times the number of cases reported in 2013 v. 2012).
- Locally acquired DENV infection has occurred in Florida since 2009. To date in 2013, three cases of locally acquired DENV infection have been reported to the [Florida Department of Health](http://www.floridahealth.gov/diseases-and-conditions/dengue-fever/), all with onset in July.

Cases in Army AD and Other Beneficiaries

- In 2013, three confirmed/probable DENV infections in Army AD or other beneficiaries have been reported.
- Two non-AD cases acquired infection in Puerto Rico; neither experienced hemorrhagic complications (DHF).
- One DHF DENV case occurred in a cadet with travel to Africa.

Dengue Facts

- More than a third of the world's population lives in areas at increased risk of dengue infection; DENV infection is caused by one of four related viruses transmitted by mosquitoes.
- Dengue rarely occurs in the continental U.S.; most cases are imported. The majority of dengue cases in U.S. citizens occur in Puerto Rico, the U.S. Virgin Islands, Samoa and Guam, where DENV is endemic.
- The principal symptoms of dengue fever are high fever, severe headache, severe pain behind the eyes, joint pain, muscle and bone pain, rash, and mild bleeding (e.g., nose or gums bleed, easy bruising).
- Globally, *Aedes aegypti* is the principal mosquito vector of DENV, an invasive species with tropical and sub tropical worldwide distribution.
- *Aedes albopictus* (Asian tiger mosquito) is known for aggressive bites and can also transmit DENV; for a comparison of DENV vectors, visit: <http://www.cdc.gov/dengue/resources/30Jan2012/comparisondenguevectors.pdf>.

Mosquito Prevention and Control

- Preventive Medicine personnel should continue to stress the importance of eliminating mosquito breeding sites (standing water), and using personal protective measures (preferably those containing DEET).

Dengue Virus Infection[§]

Population	Reporting Period [¥]	Cum. 2013	Cum. 2012
United States ^β	0	167	229
Puerto Rico	0	4,188	1,189
Army Cases[±]			
Confirmed and Probable			
Army AD [‡]	0	1	4
Army Non-AD [†]	0	2	1
Regional Case Distribution			
PHCR-North	0	1	3
PHCR-Pacific	0	1	1
PHCR-South	0	1	1

Sources: CDC and AIPH DRSI.

Note: Reporting location may differ from exposure location.

[§] Includes Dengue Fever and Dengue Hemorrhagic Fever (DHF) cases.

^β Provisional cases through 10 August 2013 and 11 August 2012 (week 32), excludes U.S. territories.

[¥] Cases reported in week 32 (4-10 August 2013).

[±] Confirmed and probable cases from 1 January-10 August 2013.

[‡] Active duty, recruits, cadets.

[†] Army-associated beneficiaries.

World Health Organization—Distribution of Global Dengue Risk

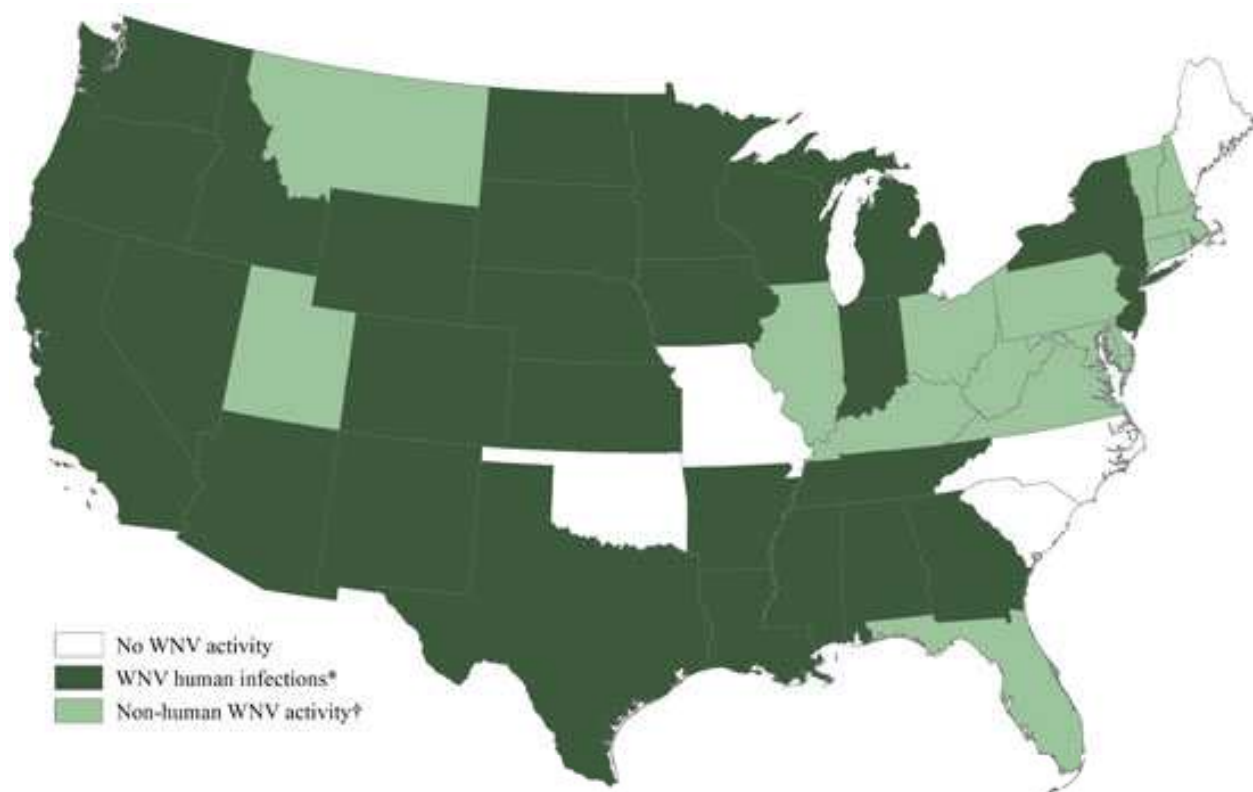


Resources: CDC WNV • CDC Tickborne Diseases • Human Tick Test Program • USAPHC WNV Fact

Contact us: USAPHC Disease Epidemiology or 410-417-2377

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West Nile Virus Activity by State – United States, 2013 (as of August 20, 2013)



**WNV human disease cases or presumptive viremic blood donors. Presumptive viremic blood donors have a positive screening test which has not necessarily been confirmed.

†WNV veterinary disease cases, or infections in mosquitoes, birds, or sentinel animals.

Data table:

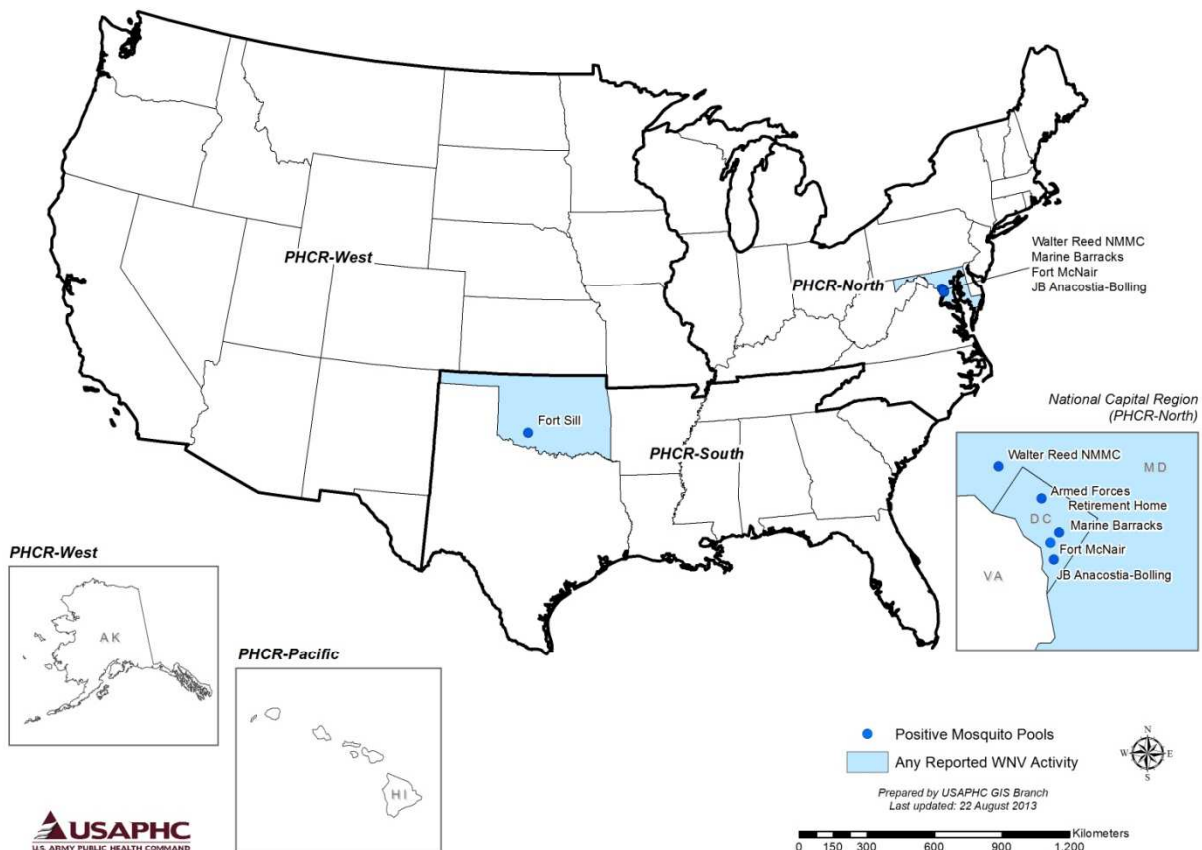
Non-human West Nile virus infections have been reported to CDC ArboNET from the following states: Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin and Wyoming.

Human West Nile virus infections have been reported to CDC ArboNET from the following states: Alabama, Arizona, Arkansas, California, Colorado, Georgia, Idaho, Indiana, Iowa, Kansas, Louisiana, Michigan, Minnesota, Mississippi, Nebraska, Nevada, New Jersey, New Mexico, New York, North Dakota, Oregon, South Dakota, Tennessee, Texas, Washington, Wisconsin and Wyoming.

Source: <http://www.cdc.gov/westnile/statsMaps/preliminaryMapsData/activitystatedate.html>

West Nile Virus Activity, by State and Army Public Health Command Region (PHCR), United States, 2013

As of August 22, 2013

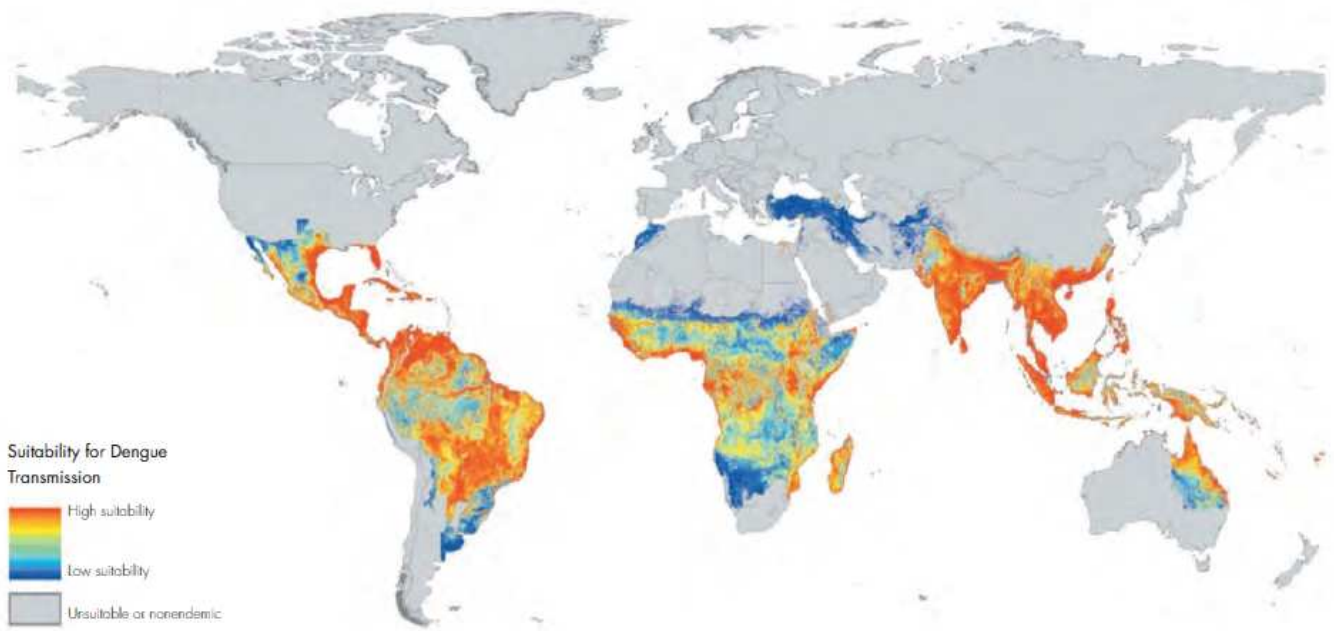


Footnote: The map displays white areas that indicate no reported West Nile virus (WNV) activity, light blue areas represent any reported WNV activity* within a state; dark blue circles represent WNV positive mosquito pools on military installations, and red squares represent the reporting location/installation of Army human cases (probable and/or confirmed). If West Nile virus infection is reported from any area of a state, that entire state is shaded light blue.

*Includes WNV Army human disease cases (probable and/or confirmed) and infections in mosquito pools on military installations.

Prepared by: US Army Public Health Command Geographic Information Systems Branch.

World Health Organization—Distribution of Global Dengue Risk



Determination of risk status based on combined reports from WHO, the United States Centers for Disease Control and Prevention, Gideon online, ProMED, DengueMap, Eurosurveillance and published literature (Simmons CP et al, 2012).

Source: World Health Organization. *Global Strategy for Dengue Prevention and Control, 2012-2020*. Available at: http://apps.who.int/iris/bitstream/10665/75303/1/9789241504034_eng.pdf.